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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEYKIN, RITA

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 10/04/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/768,526

Applicant(s)

YU, SHOU-TE

Examiner

Rita Leykin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 10 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

This office action is in response to the submitted request for reconsideration, filed on July 10, 2002.

#### ***Response to Remarks.***

In the request for reconsideration applicant is arguing that provided reference by Frazee US # 4,121,141 is not applicable because Frazee teaches dc motor speed control rather than reduction of motor peak current during the starting of the motor and gradual increase of current flowing through the motor, as claimed. Applicant's remarks have been fully considered by found not persuasive.

With respect to independent claims 1 and 14 Frazee discussed the operation of motor at the instant when the power is first applied to the motor circuit 66, and no signal to the circuit is introduced from the tachometer 10 to the input terminals 12 and 14 of the control circuit, (see column 3, lines 46-48). That reads on the situation when the induction motor is at the beginning of actuation, in other words, motor starting.

With reference to Fig. 2 Frazee teaches that during speed increase such as indicated by numeral 70 in waveform A, there will be a proportional decrease in the input frequency generated by the tachometer 10 and a consequent lengthening of the output pulse J that controls the motor switching transistor 64, indicated by numeral 72. As the slowing of motor 66 continues, the transistor 64 remains "on" for longer periods to apply higher currents to overcome the slowing tendency, (see column 4, lines 1-17). That reads on "gradually increasing a current flowing through the motor corresponding to the control signal".

The device for elimination of peak current during motor actuation having claimed device combination is clearly anticipated by the Frazee setting. Based on the above consideration the examiner maintaining the previous rejection as follows.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Frazee US # 4,121,141.

Frazee discloses in Fig. 1 and Fig. 2 a dc motor speed control circuit with tachometer feedback signals proportional to the dc motor 66 speed with a voltage reference representing the desired motor speed and generates pulses for controlling a variable duty cycle switch in the motor circuit.

With reference to Fig, 1 Frazee teaches:

- A tachometer 10, that generates an AC signal that is applied to the input terminals 12 and 14;
- A generator circuit 24, that generates a pair of complementary square wave output signals as indicated by the waveforms A and B, (see Fig. 2).

These output signals are at a constant amplitude determined by the

supply voltage applied to the switch 24 and are at the frequency of the ac signals produced by the tachometer 10, (see column 2, lines 28-33);

- A potentiometer 58 that serves as a motor speed adjustment and applies a threshold level indicated by the reference 60 in the saw-tooth waveform H, as shown in Fig. 2 to the amplifier 56. The amplifier 56, is therefore a signal comparator and produces an output signal J;

As a power first applied to the motor circuit, the motor 66 is stationary and no signals are introduced from tachometer 10a the input terminals 12 and 14. Therefore, a signal G at the collector of transistor 60 remains low and the comparator 56 produces a constant high level output signal J, that turns power switch 64 to apply maximum start current to the motor 66. The motor 66 starts turning and when the tachometer signal is of sufficient amplitude to switch the amplifier 24 the integrator capacitor 54 starts to charge for a constant period determined by its input waveform G and to discharge for a period of capacitor 54 becomes shorter until the average voltage on the capacitor 54 equals the reference threshold voltage 60 that is applied by potentiometer 58 and illustrated in waveform H. This results in a 50% duty cycle rectangular current drive to the output transistor 64 to control the rotational speed of motor 66.

### ***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita Leykin whose telephone number is (703)308-5828. The examiner can normally be reached on Monday-Friday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703)308-3370.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Rita Leykin  
Examiner  
Art Unit 2837



R.L.  
September 26, 2002